

Notice of Allowability

Application No.

10/764,809

Examiner

Yolanda L. Wilson

Applicant(s)

COATNEY ET AL.

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to the amendment received 06/27/2007.
2. ☒ The allowed claim(s) is/are 1-27 and 30.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☐ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO/SB/08), Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application
6. ☐ Interview Summary (PTO-413), Paper No./Mail Date _____
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____

EXAMINER'S AMENDMENT

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Shannen Delaney on August 27, 2007.

The application has been amended as follows:

Claims

2. Claim 10. "A storage system including a first server owning interconnected first storage devices and a second server owning interconnected second storage devices, the first server and the second server being connected together by a cluster interconnect so that the second server can take over ownership of the first storage devices upon failure of the first server, the storage system comprising: a coredump function that (a) causes the first server to write its memory to a coredump storage device chosen from one of the first storage devices in response to a sensed failure of the first server, each of the first storage devices including a coredump attribute (b) causes the coredump attribute of the coredump storage device to be set to a coredump state and the coredump attribute of other of the first storage devices to be set to a non-coredump state; and a takeover function that (a) identifies each of the first storage devices with the coredump attribute set to the non-coredump state, (b) changes of each of the second devices having the coredump attribute set to the non-coredump state

from ownership by the first server to ownership by the second server so that takeover of the ownership can proceed in parallel with the writing of the memory to the coredump storage device."

Should be:

"A storage system including a first server owning interconnected first storage devices and a second server owning interconnected second storage devices, the first server and the second server being connected together by a cluster interconnect so that the second server can take over ownership of the first storage devices upon failure of the first server, the storage system comprising: a coredump function executed by the first server where the coredump function (a) causes the first server to write its memory to a coredump storage device chosen from one of the first storage devices in response to a sensed failure of the first server, each of the first storage devices including a coredump attribute (b) causes the coredump attribute of the coredump storage device to be set to a coredump state and the coredump attribute of other of the first storage devices to be set to a non-coredump state; and a takeover function executed by the second server where the coredump function (a) identifies each of the first storage devices with the coredump attribute set to the non-coredump state, (b) changes of each of the second devices having the coredump attribute set to the non-coredump state from ownership by the first server to ownership by the second server so that takeover of the ownership can proceed in parallel with the writing of the memory to the coredump storage device."

Claim 27. "A method for taking over a failed storage system owning disks that store file service data and owning at least one disk that is free of file service data by a clustered partner storage system, the failed storage system being adapted to, in a event of failure, transfer memory contents of the failed storage system to a disk, comprising: taking ownership of disks of the failed storage system that store file service data by the clustered partner storage system; and simultaneously writing the memory contents of the failed storage system to the at least one disk that is free from file service data."

Should be

"A method for taking over a failed storage system owning disks that store file service data and owning at least one disk that is free of file service data by a clustered partner storage system, the failed storage system being adapted to, in a event of failure, transfer memory contents of the failed storage system to a disk, comprising: taking ownership of disks of the failed storage system that store file service data by the clustered partner storage system; and simultaneously writing the memory contents of the failed storage system to the at least one disk that is free from file service data; taking ownership of the at least one disk that is free from file service data by the clustered partner storage system upon completion of writing the memory contents of the failed storage system; setting by the failed storage system, a coredump attribute on the at least one disk that is free from file service data prior to writing the memory contents of the failed storage system to the coredump disk; re-setting by the failed storage system, the coredump

attribute upon completion of writing the memory contents of the failed storage system.”

Claim 30. “The method of claim 29 further comprising...” should be “The method of claim 27 further comprising...”

Reasons for Allowance

3. The following is an examiner’s statement of reasons for allowance: The primary reason for the allowance of claims 1-9 is the inclusion of the following limitations: “identifying, by the clustered partner filer, the coredump attribute of the other disks and taking ownership of the other disks while allowing the failed filer to maintain ownership of the coredump disk; upon completion of the writing of the memory contents, changing the coredump attribute to a non-coredump state; and upon identification of the non-coredump state in the coredump attribute of the coredump disk, taking ownership, by the clustered partner filer, of the coredump disk”.

The primary reason for the allowance of claims 10-14 is the inclusion of the following limitations: “(a) identifies each of the first storage devices with the coredump attribute set to the non-coredump state, (b) changes of each of the second devices having the coredump attribute set to the non-coredump state from ownership by the first server to ownership by the second server so that takeover of the ownership can proceed in parallel with the writing of the memory to the coredump storage device.”

The primary reason for the allowance of claims 15-22 is the inclusion of the following limitations: “setting the attribute of the coredump storage device to be set to a coredump state and the coredump attribute of other of the first storage devices to be set

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to set to a non-coredump state; identifying each of the first storage devices with the coredump attribute set to the non-coredump state; changing of each of the second devices having the coredump attribute set to the non-coredump state from ownership by the first server to ownership by the second server so that takeover of the ownership can proceed in parallel with the writing of the memory to the coredump storage device".

The primary reason for the allowance of claims 23-26 is the inclusion of the following limitations: "setting the attribute of the coredump storage device to be set to a coredump state and the coredump attribute of other of the first storage devices to be set to set to a non-coredump state; identifying each of the first storage devices with the coredump attribute set to the non-coredump state; changing of each of the second devices having the coredump attribute set to the non-coredump state from ownership by the first server to ownership by the second server so that takeover of the ownership can proceed in parallel with the writing of the memory to the coredump storage device".

The primary reason for the allowance of claims 27,30 is the inclusion of the following limitations: 'setting by the failed storage system, a coredump attribute on the at least one disk that is free from file service data prior to writing the memory contents of the failed storage system to the coredump disk; re-setting by the failed storage system, the coredump attribute upon completion of writing the memory contents of the failed storage system'.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably

accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Yolanda L. Wilson whose telephone number is (571) 272-3653. The examiner can normally be reached on M-F (7:30-4:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert Beausoliel can be reached on (571) 272-3645. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.


Yolanda L. Wilson
Primary Examiner
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